

ABSTRACT

Another embodiment of the instant invention is a method of fabricating a conductive interconnect for providing an electrical connection between a first conductor and a second conductor for an electrical device formed in a semiconductor substrate, the method comprising the steps of: forming a dielectric layer (layer 226 of FIGURE 2a) on the first conductor (conductor 222 of FIGURE 2a), the dielectric layer having at least one opening which exposes the first conductor; forming a layer of an oxygen-sensitive material (layer 234 of FIGURE 2d) on the dielectric layer, the oxygen-sensitive material substantially filling the opening in the dielectric layer and for providing an electrical contact to the first conductor; forming a photoresist layer on the oxygen-sensitive material, the photoresist layer having a pattern so as to expose portions of the oxygen-sensitive material; removing the exposed portions of the oxygen-sensitive material on the dielectric material, the removal step causing a residue to be formed on exposed surfaces of the remaining portions of the oxygen-sensitive material; and removing the photoresist layer by subjecting the photoresist layer with a hydrogen-containing gas incorporated into a plasma.

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